

Patent Application US 07/621,092

SEQUENCE LISTING

(1) GENERAL INFORMATION:

(i) APPLICANT(S): Kaufman, Randal J.
Wasley, Louise

(ii) TITLE OF INVENTION: Method of Increasing Yield of
Mature Proteins

(iii) NUMBER OF SEQUENCES: 2

(iv) CORRESPONDENCE ADDRESS:

(A) ADDRESSEE: Genetics Institute, Inc.
(B) STREET: 87 CambridgePark Drive
(C) CITY: Cambridge
(D) STATE: Massachusetts
(E) COUNTRY: United States of America
(F) ZIP: 02140

(v) COMPUTER READABLE FORM:

(A) MEDIUM TYPE: Diskette, 3.50 inch, 720 Kb storage
(B) COMPUTER: IBM PS/2
(C) OPERATING SYSTEM: PC-DOS
(D) SOFTWARE: WordPerfect 5.1

(vi) CURRENT APPLICATION DATA:

(A) APPLICATION NUMBER: not yet available
(B) FILING DATE: 26 November 1990
(C) CLASSIFICATION: not yet available

(vii) PRIOR APPLICATION DATA: not applicable

(A) APPLICATION NUMBER:
(B) FILING DATE:

(viii) ATTORNEY/AGENT INFORMATION

(A) NAME: Ellen J. Kapinos, Esquire
(B) REGISTRATION NUMBER: 32,245
(C) REFERENCE/DOCKET NUMBER: GI 5181

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54 (ix) TELECOMMUNICATION INFORMATION:
55
56 (A) TELEPHONE: (617) 876-1170
57 (B) TELEFAX: (617) 876-5851
58
59 (2) INFORMATION FOR SEQ ID NO:1
60
61 (i) SEQUENCE CHARACTERISTICS:
62
63 (A) LENGTH: 2385 base pairs
64
65 (B) TYPE: nucleic acid
66
67 (C) STRANDEDNESS: double
68
69 (D) Topology: unknown
70
71 (ii) MOLECULE TYPE: partial human genomic DNA
72
73 (A) DESCRIPTION: sequence encoding furin
74
75 (iii) HYPOTHETICAL: no
76
77 (iv) ANTI-SENSE: no
78
79 (v) PUBLICATION INFORMATION: A.M.W. van den Ouweland et al,
80 Nucl. Acids. Res., 18:664 (1990)
81
82 (vi) SEQUENCE DESCRIPTION: SEQ ID NO:1
83
84 ATG GAG CTC AGG CCC TGG TTC 21
85 Met Glu Leu Arg Pro Trp Leu
86 1 5
87
88 CTA TGG GTC GTA CCA CCA ACA GGA ACC TTG GTC CTG CTA 60
89 Leu Trp Val Val Ala Ala Thr Gly Thr Leu Val Leu Leu
90 10 15 20
91
92 GCA GCT GAT GCT CAG GGC CAG AAG GTC TTC ACC AAC ACG 99
93 Ala Ala Asp Ala Gln Gly Gln Lys Val Phe Thr Asn Thr
94 25 30
95
96 TGG GCT GTG CGC ATC CCT GGA GGC CCA GCG GTG GCC AAC 138
97 Trp Ala Val Arg Ile Pro Gly Gly Pro Ala Val Ala Asn
98 35 40 45
99
100
101 AGT GTG GCA CGG AAG CAT GGG TTC CTC AAC CTG GGC CAG 177
102 Ser Val Ala Arg Lys His Gly Phe Leu Asn Leu Gly Gln
103 50 55
104
105 ATC TTC GGG GAC TAT TAC CAC TTC TGG CAT CGA GGA GTG 216
106 Ile Phe Gly Asp Tyr Tyr His Phe Trp His Arg Gly Val

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	60	65	70	
107				
108				
109				
110	ACG AAG CGG TCC CTG TCG CCT CAC CGC CCG CGG CAC AGC			255
111	Thr Lys Arg Ser Leu Ser Pro His Arg Pro Arg His Ser			
112	75	80	85	
113				
114				
115	CGG CTG CAG AGG GAG CCT CAA GTA CAG TGG CTG GAA CAG			294
116	Arg Leu Gln Arg Glu Pro Gln Val Gln Trp Leu Glu Gln			
117	90	95		
118				
119	CAG GTG GCA AAG CGA CGG ACT AAA CGG GAC GTG TAC CAG			333
120	Gln Val Ala Lys Arg Arg Thr Lys Arg Asp Val Tyr Gln			
121	100	105	110	
122				
123	GAG CCC ACA GAC CCC AAG TTT CCT CAG CAG TGG TAC CTG			372
124	Glu Pro Thr Asp Pro Lys Phe Pro Gln Gln Trp Tyr Leu			
125	115	120		
126				
127	TCT GGT GTC ACT CAG CGG GAC CTG AAT GTG AAG GCG GCC			411
128	Ser Gly Val Thr Gln Arg Asp Leu Asn Val Lys Ala Ala			
129	125	130	135	
130				
131	TGG GCG CAG GGC TAC ACA GGG CAC GGC ATT CTG GTC TCC			450
132	Trp Ala Gln Gly Tyr Thr Gly His Gly Ile Val Val Ser			
133	140	145	150	
134				
135	ATT CTG GAC GAT GGC ATC GAG AAG AAC CAC CCC GAC TTG			489
136	Ile Leu Asp Asp Gly Ile Glu Lys Asn His Pro Asp Leu			
137	155	160		
138				
139	GCA GGC AAT TAT GAT CCT GGG GCC AGT TTT CAT GTC AAT			528
140	Ala Gly Asn Tyr Asp Pro Gly Ala Ser Phe Asp Val Asn			
141	165	170	175	
142				
143	GAC CAG GAC CCT GAC CCC CAG CCT CGG TAC ACA CAG ATG			567
144	Asp Gln Asp Pro Asp Pro Gln Pro Arg Tyr Thr Gln Met			
145	180	185		
146				
147	AAT GAC AAC AGG CAC GGC ACA CGG TGT GCG GGG GAA GTG			606
148	Asn Asp Asn Arg His Gly Thr Arg Cys Ala Gly Glu Val			
149	190	195	200	
150				
151	GCT GCC GTG GCC AAC AAC CGT GTC TGT GGT GTA GGT GTG			645
152	Ala Ala Val Ala Asn Asn Gly Val Cys Gly Val Gly Val			
153	205	210	215	
154				
155	GCC TAC AAC GCC CGC ATT GGA GGG GTC CGC ATG CTG GAT			684
156	Ala Tyr Asn Ala Arg Ile Gly Gly Val Arg Met Leu Asp			
157	220	225		
158				
159	GGC GAG GTG ACA GAT GCA GTG GAG GCA CGC TCG CTG GGC			723

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160	Gly	Glu	Val	Thr	Asp	Ala	Val	Glu	Ala	Arg	Ser	Leu	Gly	
161		230					235					240		
162														
163	CTG	AAC	CCC	AAC	CAC	ATC	CAC	ATC	TAC	AGT	GCC	AGC	TGG	762
164	Leu	Asn	Pro	Asn	His	Ile	His	Ile	Tyr	Ser	Ala	Ser	Trp	
165				245					250					
166														
167	GGC	CCC	GAG	GAT	GAC	GGC	AAG	ACA	GTG	GAT	GGG	CCA	GCC	801
168	Gly	Pro	Glu	Asp	Asp	Gly	Lys	Thr	Val	Asp	Gly	Pro	Ala	
169	255					260					265			
170														
171	CGG	CTC	GCC	GAG	GAG	GCC	TTC	TTC	CGT	GGG	CTT	AGC	CAG	840
172	Arg	Leu	Ala	Glu	Glu	Ala	Phe	Phe	Arg	Gly	Val	Ser	Gln	
173			270					275					280	
174														
175	GGC	CGA	GGG	GGG	CTG	GGC	TCC	ATC	TTT	GTC	TGG	GCC	TCG	879
176	Gly	Arg	Gly	Gly	Leu	Gly	Ser	Ile	Phe	Val	Trp	Ala	Ser	
177					285					290				
178														
179	GGG	AAC	GGG	GGG	CGG	GAA	CAT	GAC	AGC	TGC	AAC	TGC	GAC	918
180	Gly	Asn	Gly	Gly	Arg	Glu	His	Asp	Ser	Cys	Asn	Cys	Asp	
181		295					300					305		
182														
183	GGC	TAC	ACC	AAC	AGT	ATC	TAC	ACG	CTG	TCC	ATC	AGC	AGC	957
184	Gly	Tyr	Thr	Asn	Ser	Ile	Tyr	Thr	Leu	Ser	Ile	Ser	Ser	
185				310					315					
186														
187	GCC	ACG	CAG	TTT	GGC	AAC	GTG	CCG	TGG	TAC	AGC	GAG	GCC	996
188	Ala	Thr	Gln	Phe	Gly	Asn	Val	Pro	Trp	Tyr	Ser	Glu	Ala	
189	320					325					330			
190														
191	TGC	TCG	TCC	ACA	CTG	GCC	ACG	ACC	TAC	AGC	AGT	GGC	AAC	1035
192	Cys	Ser	Ser	Thr	Leu	Ala	Thr	Thr	Tyr	Ser	Ser	Gly	Asn	
193			335					340					345	
194														
195	CAG	AAT	GAG	AAG	CAG	ATC	GTG	ACG	ACT	GAC	TTG	CGG	CAG	1074
196	Gln	Asn	Glu	Lys	Gln	Ile	Val	Thr	Thr	Asp	Leu	Arg	Gln	
197					350					355				
198														
199	AAG	TGC	ACG	GAG	TCT	CAC	ACG	GGC	ACC	TCA	GCC	TCT	GCC	1113
200	Lys	Cys	Thr	Glu	Ser	His	Thr	Gly	Thr	Ser	Ala	Ser	Ala	
201		360					365					370		
202														
203	CCC	TTA	GCA	GCC	GGC	ATC	ATT	GCT	CTC	ACC	CTG	GAG	GCC	1152
204	Pro	Leu	Ala	Ala	Gly	Ile	Ile	Ala	Leu	Thr	Leu	Glu	Ala	
205				375					380					
206														
207	AAT	AAG	AAC	CTC	ACA	TGG	CGG	GAC	ATG	CAA	CAC	CTG	GTG	1191
208	Asn	Lys	Asn	Leu	Thr	Trp	Arg	Asp	Met	Gln	His	Leu	Val	
209	385					390					395			
210														
211	GTA	CAG	ACC	TCG	AAG	CCA	GCC	CAC	CTC	AAT	GCC	AAC	GAC	1230
212	Val	Gln	Thr	Ser	Lys	Pro	Ala	His	Leu	Asn	Ala	Asn	Asp	

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	400	405	410	
213				
214				
215	TGG GCC ACC AAT GGT GTG GGG CGG AAA GTG AGC CAC TCA			1269
216	Trp Ala Thr Asn Gly Val Gly Arg Lys Val Ser His Ser			
217		415	420	
218				
219	TAT GGC TAC GGG CTT TTC GAC GCA GGC GCC ATG GTG GCC			1308
220	Tyr Gly Tyr Gly Leu Leu Asp Ala Gly Ala Met Val Ala			
221	425	430	435	
222				
223	CTG GCC CAG AAT TGG ACC ACA GTC GCC CCC CAG CGG AAG			1347
224	Leu Ala Gln Asn Trp Thr Thr Val Ala Pro Gln Arg Lys			
225		440	445	
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227	TGC ATC ATC GAC ATC CTC ACC GAG CCC AAA GAC ATC GGG			1386
228	Cys Ile Ile Asp Ile Leu Thr Glu Pro Lys Asp Ile Gly			
229	450	455	460	
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231	AAA CGG CTC GAC CTC CGG AAC ACC GTG ACC GCG TCC CTG			1425
232	Lys Arg Leu Glu Val Arg Lys Thr Val Thr Ala Cys Leu			
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235	GGC GAG CCC AAC CAC ATC ACT CGG CTG GAG CAC GCT CAG			1464
236	Gly Glu Pro Asn His Ile Thr Arg Leu Glu His Ala Gln			
237		480	485	
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239	GCG CGG CTC ACC CTG TCC TAT AAT CGC CGT GGC GAC CTG			1503
240	Ala Arg Leu Thr Leu Ser Tyr Asn Arg Arg Gly Asp Leu			
241	490	495	500	
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243	GCC ATC CAC CTG GTC AGC CCC ATG GGC ACC CGC TCC ACC			1542
244	Ala Ile His Leu Val Ser Pro Met Gly Thr Arg Ser Thr			
245		505	510	
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247	CTG CTG GCA GCC AGG CCA CAT GAC TAC TCC GCA GAT GGG			1581
248	Leu Leu Ala Ala Arg Pro His Asp Tyr Ser Ala Asp Gly			
249	515	520	525	
250				
251	TTT AAT GAC TGG GCC TTC ATG ACA ACT CAT TCC TGG GAT			1620
252	Phe Asn Asp Trp Ala Phe Met Thr Thr His Ser Trp Asp			
253		530	535	540
254				
255	GAC GAT CCC TCT GGG GAG TGG GTC CTA GAG ATT GAA AAC			1659
256	Glu Asp Pro Ser Gly Glu Trp Val Leu Glu Ile Glu Asn			
257		545	550	
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259	ACC AGC GAA GCC AAC AAC TAT GGG ACG CTG ACC AAC TCC			1698
260	Thr Ser Glu Ala Asn Asn Tyr Gly Thr Leu Thr Lys Phe			
261	555	560	565	
262				
263	ACC CTC GTA CTC TAT GGC ACC GCC CCT GAC GGG CTC CCC			1737
264	Thr Leu Val Leu Tyr Gly Thr Ala Pro Glu Gly Leu Pro			
265		570	575	

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266
267  GTA  CCT  CCA  GAA  AGC  AGT  GGC  TGC  AAG  ACC  CTC  ACG  TCC  1776
268  Val  Pro  Pro  Glu  Ser  Ser  Gly  Cys  Lys  Thr  Leu  Thr  Ser
269  580                               585                               590
270
271  AGT  CAG  GCC  TGT  GTG  GTG  TGC  GAG  GAA  GGC  TTC  TCC  CTC  1815
272  Ser  Gln  Ala  Cys  Val  Val  Cys  Glu  Glu  Gly  Phe  Ser  Leu
273                595                               600                               605
274
275  CAC  CAG  AAG  AGC  TGT  GTC  CAG  CAC  TGC  CCT  CCA  GGC  TTC  1854
276  His  Gln  Lys  Ser  Cys  Val  Gln  Asn  Cys  Pro  Pro  Gly  Phe
277                610                               615
278
279  GCC  CCC  CAA  GTC  CTC  GAT  ACG  CAC  TAT  AGC  ACC  GAG  AAT  1893
280  Ala  Pro  Gln  Val  Leu  Asp  Thr  Asn  Tyr  Ser  Thr  Glu  Asn
281        620                               625                               630
282
283  GAC  GTG  GAG  ACC  ATC  CGG  GCC  AGC  GTC  TGC  GCC  CCC  TGC  1932
284  Asp  Val  Glu  Thr  Ile  Arg  Ala  Ser  Val  Cys  Ala  Pro  Cys
285                635                               640
286
287  CAC  GCC  TCA  TGT  GCC  ACA  TGC  CAG  GGG  CCG  GCC  CTG  ACA  1971
288  His  Ala  Ser  Cys  Ala  Thr  Cys  Gln  Gly  Pro  Ala  Leu  Thr
289  645                               650                               655
290
291  GAC  TGC  CTC  AGC  TGC  CCC  AGC  CAC  GCC  TCC  TTG  GAC  CCT  2010
292  Asp  Cys  Leu  Ser  Cys  Pro  Ser  His  Ala  Ser  Leu  Asp  Pro
293        660                               665                               670
294
295  GTG  GAG  CAG  ACT  TGC  TCC  CGG  CAA  AGC  CAG  AGC  AGC  CGA  2049
296  Val  Glu  Gln  Thr  Cys  Ser  Arg  Gln  Ser  Gln  Ser  Ser  Arg
297                675                               680
298
299  GAG  TCC  CCG  CCA  CAG  CAG  CAG  CCA  CCT  CGG  CTG  CCC  CCG  2088
300  Glu  Ser  Pro  Pro  Gln  Gln  Gln  Pro  Pro  Arg  Leu  Pro  Pro
301        685                               690                               695
302
303  GAG  GTG  GAG  GCG  GGG  CAA  CGG  CTG  CGG  GCA  GGG  CTG  CTG  2127
304  Glu  Val  Glu  Ala  Gly  Gln  Arg  Leu  Arg  Ala  Gly  Leu  Leu
305                700                               705
306
307  CCC  TCA  CAC  CTG  CCT  GAG  GTG  GTG  GCC  GGC  CTC  AGC  TGC  2166
308  Pro  Ser  His  Leu  Pro  Glu  Val  Val  Ala  Gly  Leu  Ser  Cys
309  710                               715                               720
310
311  GCC  TTC  ATC  GTG  CTG  GTC  TTC  GTC  ACT  GTC  TTC  CTG  CTC  2205
312  Ala  Phe  Ile  Val  Leu  Val  Phe  Val  Thr  Val  Phe  Leu  Val
313        725                               730                               735
314
315  CTG  CAG  CTG  CGC  TCT  GGC  TTT  AGT  TTT  CGG  GGG  GTG  AAG  2244
316  Leu  Gln  Leu  Arg  Ser  Gly  Phe  Ser  Phe  Arg  Gly  Val  Lys
317                740                               745
318

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319 GTG TAC ACC ATG GAC CGT GGC CTC ATC TCC TAC AAG GGG 2283
320 Val Tyr Thr Met Asp Arg Gly Leu Ile Ser Tyr Lys Gly
321 750 755 760

322
323 CTG CCC CCT GAA GCC TGG CAG GAG GAG TGC CCG TCT GAC 2322
324 Leu Pro Pro Glu Ala Trp Gln Glu Glu Cys Pro Ser Asp
325 765 770

326
327 TCA GAA GAG GAC GAG GGC CGG GGC GAG AGG ACC GCC TTT 2361
328 Ser Glu Glu Asp Glu Gly Arg Gly Glu Arg Thr Ala Phe
329 775 780 785

330
331 ATC AAA GAC CAG AGC GCC CTC TGA 2385
332 Ile Lys Asp Gln Ser Ala Leu End
333 790

334
335
336 (3) INFORMATION FOR SEQ ID NO:2

337
338 (i) SEQUENCE CHARACTERISTICS:

339
340 (A) LENGTH: 794 amino acids

341
342 (B) TYPE: amino acids

343
344 (C) STRANDEDNESS: single

345
346 (D) Topology: unknown

347
348 (ii) MOLECULE TYPE: furin

349
350 (iii) HYPOTHETICAL: no

351
352 (iv) ANTI-SENSE: no

353
354 (v) PUBLICATION INFORMATION: A.M.W. van den Ouweland et al,
355 Nucl. Acids. Res., 18:664 (1990)

356
357 (vi) SEQUENCE DESCRIPTION: SEQ ID NO:2

358
359
360 Met Glu Leu Arg Pro Trp Leu
361 1 5

362
363 Leu Trp Val Val Ala Ala Thr Gly Thr Leu Val Leu Leu
364 10 15 20

365
366 Ala Ala Asp Ala Gln Gly Gln Lys Val Phe Thr Asn Thr
367 25 30

368
369 Trp Ala Val Arg Ile Pro Gly Gly Pro Ala Val Ala Asn
370 35 40 45

371

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372 Ser Val Ala Arg Lys His Gly Phe Leu Asn Leu Gly Gln
373 50 55
374
375 Ile Phe Gly Asp Tyr Tyr His Phe Trp His Arg Gly Val
376 60 65 70
377
378 Thr Lys Arg Ser Leu Ser Pro His Arg Pro Arg His Ser
379 75 80 85
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381
382 Arg Leu Gln Arg Glu Pro Gln Val Gln Trp Leu Glu Gln
383 90 95
384
385 Gln Val Ala Lys Arg Arg Thr Lys Arg Asp Val Tyr Gln
386 100 105 110
387
388 Glu Pro Thr Asp Pro Lys Phe Pro Gln Gln Trp Tyr Leu
389 115 120
390
391 Ser Gly Val Thr Gln Arg Asp Leu Asn Val Lys Ala Ala
392 125 130 135
393
394 Trp Ala Gln Gly Tyr Thr Gly His Gly Ile Val Val Ser
395 140 145 150
396
397 Ile Leu Asp Asp Gly Ile Glu Lys Asn His Pro Asp Leu
398 155 160
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400 Ala Gly Asn Tyr Asp Pro Gly Ala Ser Phe Asp Val Asn
401 165 170 175
402
403 Asp Gln Asp Pro Asp Pro Gln Pro Arg Tyr Thr Gln Met
404 180 185
405
406 Asn Asp Asn Arg His Gly Thr Arg Cys Ala Gly Glu Val
407 190 195 200
408
409 Ala Ala Val Ala Asn Asn Gly Val Cys Gly Val Gly Val
410 205 210 215
411
412 Ala Tyr Asn Ala Arg Ile Gly Gly Val Arg Met Leu Asp
413 220 225
414
415 Gly Glu Val Thr Asp Ala Val Glu Ala Arg Ser Leu Gly
416 230 235 240
417
418 Leu Asn Pro Asn His Ile His Ile Tyr Ser Ala Ser Trp
419 245 250
420
421 Gly Pro Glu Asp Asp Gly Lys Thr Val Asp Gly Pro Ala
422 255 260 265
423
424 Arg Leu Ala Glu Glu Ala Phe Phe Arg Gly Val Ser Gln

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425		270		275		280							
426													
427	Gly	Arg	Gly	Gly	Leu	Gly	Ser	Ile	Phe	Val	Trp	Ala	Ser
428					285					290			
429													
430	Gly	Asn	Gly	Gly	Arg	Glu	His	Asp	Ser	Cys	Asn	Cys	Asp
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432													
433	Gly	Tyr	Thr	Asn	Ser	Ile	Tyr	Thr	Leu	Ser	Ile	Ser	Ser
434				310					315				
435													
436													
437	Ala	Thr	Gln	Phe	Gly	Asn	Val	Pro	Trp	Tyr	Ser	Glu	Ala
438	320					325					330		
439													
440	Cys	Ser	Ser	Thr	Leu	Ala	Thr	Thr	Tyr	Ser	Ser	Gly	Asn
441			335					340					345
442													
443	Gln	Asn	Glu	Lys	Gln	Ile	Val	Thr	Thr	Asp	Leu	Arg	Gln
444					350					355			
445													
446	Lys	Cys	Thr	Glu	Ser	His	Thr	Gly	Thr	Ser	Ala	Ser	Ala
447		360					365					370	
448													
449	Pro	Leu	Ala	Ala	Gly	Ile	Ile	Ala	Leu	Thr	Leu	Glu	Ala
450				375					380				
451													
452	Asn	Lys	Asn	Leu	Thr	Trp	Arg	Asp	Met	Gln	His	Leu	Val
453	385					390					395		
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455	Val	Gln	Thr	Ser	Lys	Pro	Ala	His	Leu	Asn	Ala	Asn	Asp
456			400					405					410
457													
458	Trp	Ala	Thr	Asn	Gly	Val	Gly	Arg	Lys	Val	Ser	His	Ser
459				415						420			
460													
461	Tyr	Gly	Tyr	Gly	Leu	Leu	Asp	Ala	Gly	Ala	Met	Val	Ala
462		425					430					435	
463													
464	Leu	Ala	Gln	Asn	Trp	Thr	Thr	Val	Ala	Pro	Gln	Arg	Lys
465				440					445				
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467	Cys	Ile	Ile	Asp	Ile	Leu	Thr	Glu	Pro	Lys	Asp	Ile	Gly
468	450					455					460		
469													
470	Lys	Arg	Leu	Glu	Val	Arg	Lys	Thr	Val	Thr	Ala	Cys	Leu
471			465					470					475
472													
473	Gly	Glu	Pro	Asn	His	Ile	Thr	Arg	Leu	Glu	His	Ala	Gln
474				480						485			
475													
476	Ala	Arg	Leu	Thr	Leu	Ser	Tyr	Asn	Arg	Arg	Gly	Asp	Leu
477		490					495					500	

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478
479 Ala Ile His Leu Val Ser Pro Met Gly Thr Arg Ser Thr
480 505 510
481
482 Leu Leu Ala Ala Arg Pro His Asp Tyr Ser Ala Asp Gly
483 515 520 525
484
485 Phe Asn Asp Trp Ala Phe Met Thr Thr His Ser Trp Asp
486 530 535 540
487
488 Glu Asp Pro Ser Gly Glu Trp Val Leu Glu Ile Glu Asn
489 545 550
490
491 Thr Ser Glu Ala Asn Asn Tyr Gly Thr Leu Thr Lys Phe
492 555 560 565
493
494 Thr Leu Val Leu Tyr Gly Thr Ala Pro Glu Gly Leu Pro
495 570 575
496
497 Val Pro Pro Glu Ser Ser Gly Cys Lys Thr Leu Thr Ser
498 580 585 590
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500 Ser Gln Ala Cys Val Val Cys Glu Glu Gly Phe Ser Leu
501 595 600 605
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503 His Gln Lys Ser Cys Val Gln Asn Cys Pro Pro Gly Phe
504 610 615
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506 Ala Pro Gln Val Leu Asp Thr Asn Tyr Ser Thr Glu Asn
507 620 625 630
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509 Asp Val Glu Thr Ile Arg Ala Ser Val Cys Ala Pro Cys
510 635 640
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512 His Ala Ser Cys Ala Thr Cys Gln Gly Pro Ala Leu Thr
513 645 650 655
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515 Asp Cys Leu Ser Cys Pro Ser His Ala Ser Leu Asp Pro
516 660 665 670
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518 Val Glu Gln Thr Cys Ser Arg Gln Ser Gln Ser Ser Arg
519 675 680
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521 Glu Ser Pro Pro Gln Gln Gln Pro Pro Arg Leu Pro Pro
522 685 690 695
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524 Glu Val Glu Ala Gly Gln Arg Leu Arg Ala Gly Leu Leu
525 700 705
526
527 Pro Ser His Leu Pro Glu Val Val Ala Gly Leu Ser Cys
528 710 715 720
529
530 Ala Phe Ile Val Leu Val Phe Val Thr Val Phe Leu Val

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531		725		730		735							
532													
533	Leu	Gln	Leu	Arg	Ser	Gly	Phe	Ser	Phe	Arg	Gly	Val	Lys
534					740					745			
535													
536	Val	Tyr	Thr	Met	Asp	Arg	Gly	Leu	Ile	Ser	Tyr	Lys	Gly
537		750					755					760	
538													
539	Leu	Pro	Pro	Glu	Ala	Trp	Gln	Glu	Glu	Cys	Pro	Ser	Asp
540				765					770				
541													
542	Ser	Glu	Glu	Asp	Glu	Gly	Arg	Gly	Glu	Arg	Thr	Ala	Phe
543	775					780						785	
544													
545													
546	Ile	Lys	Asp	Gln	Ser	Ala	Leu	End					
547				790									

Remove

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Line	Error	Original text
5	Unknown or Misplaced Identifier	(1). GENERAL INFORMATION:
7	Unknown or Misplaced Identifier	(i) APPLICANT(S): Kaufman, Randal J.
8	Unknown or Misplaced Identifier	Wasley, Louise
10	Unknown or Misplaced Identifier	(ii) TITLE OF INVENTION: Method of Increasing
11	Unknown or Misplaced Identifier	Mature Proteins
13	Unknown or Misplaced Identifier	(iii) NUMBER OF SEQUENCES: 2
15	Unknown or Misplaced Identifier	(iv) CORRESPONDENCE ADDRESS:
17	Unknown or Misplaced Identifier	(A) ADDRESSEE: Genetics Institute, Inc.
18	Unknown or Misplaced Identifier	(B) STREET: 87 CambridgePark Drive
19	Unknown or Misplaced Identifier	(C) CITY: Cambridge
20	Unknown or Misplaced Identifier	(D) STATE: Massachusetts
21	Unknown or Misplaced Identifier	(E) COUNTRY: United States of America
22	Unknown or Misplaced Identifier	(F) ZIP: 02140
24	Unknown or Misplaced Identifier	(v) COMPUTER READABLE FORM:
26	Unknown or Misplaced Identifier	(A) MEDIUM TYPE: Diskette, 3.50 inch, 720 Kb
28	Unknown or Misplaced Identifier	(B) COMPUTER: IBM PS/2
30	Unknown or Misplaced Identifier	(C) OPERATING SYSTEM: PC-DOS
32	Unknown or Misplaced Identifier	(D) SOFTWARE: WordPerfect 5.1
34	Unknown or Misplaced Identifier	(vi) CURRENT APPLICATION DATA:
36	Unknown or Misplaced Identifier	(A) APPLICATION NUMBER: not yet available
38	Unknown or Misplaced Identifier	(B) FILING DATE: 26 November 1990
40	Unknown or Misplaced Identifier	(C) CLASSIFICATION: not yet available
42	Unknown or Misplaced Identifier	(vii) PRIOR APPLICATION DATA: not applicable
44	Unknown or Misplaced Identifier	(A) APPLICATION NUMBER:
46	Unknown or Misplaced Identifier	(B) FILING DATE:
48	Unknown or Misplaced Identifier	(viii) ATTORNEY/AGENT INFORMATION
50	Unknown or Misplaced Identifier	(A) NAME: Ellen J. Kapinos, Esquire
51	Unknown or Misplaced Identifier	(B) REGISTRATION NUMBER: 32,245
52	Unknown or Misplaced Identifier	(C) REFERENCE/DOCKET NUMBER: GI 5181
54	Unknown or Misplaced Identifier	(ix) TELECOMMUNICATION INFORMATION:
56	Unknown or Misplaced Identifier	(A) TELEPHONE: (617) 876-1170
57	Unknown or Misplaced Identifier	(B) TELEFAX: (617) 876-5851
80	Extra Level-0 Records	Nucl. Acids. Res., 18:664 (1990)
355	Extra Level-0 Records	Nucl. Acids. Res., 18:664 (1990)
546	Wrong Amino Acid Designator	Ile Lys Asp Gln Ser Ala Leu End

] OK

SEQUENCE MISSING ITEM REPORT

12/11/90

18:02:14

Patent Application US 07/621,092

Mandatory Identifier that was not found

GENERAL INFORMATION

APPLICANT

TITLE OF INVENTION

NUMBER OF SEQUENCES

CORRESPONDENCE ADDRESS

ADDRESSEE

STREET

CITY

STATE

COUNTRY

ZIP

COMPUTER READABLE FORM

MEDIUM TYPE

COMPUTER

OPERATING SYSTEM

SOFTWARE

CURRENT APPLICATION DATA

APPLICATION NUMBER

FILING DATE

CLASSIFICATION

PRIOR APPLICATION DATA

APPLICATION NUMBER

FILING DATE